



STANDARD OPERATING PROCEDURE (SOP)

DESIGN LABORATORY

of the Faculty of Engineering
Study Program in Family Welfare and Education

UNIVERSITAS NEGERI SURABAYA



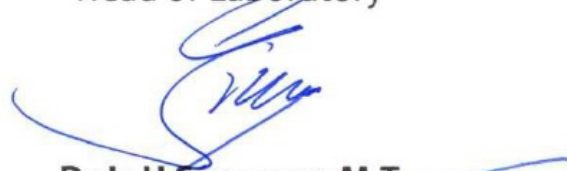
STANDARD OPERATING PROCEDURE (SOP)

FACULTY OF ENGINEERING

LABORATORY OF FAMILY WELFARE STUDY PROGRAM

Issued by:

Head of Laboratory




Dr. Ir. H. Soeparno M.T
Nip. 196511011993021001

Approved by:

Head of Faculty Quality Assurance



Dr. Subuh Isnur Haryudo S.T., M.T
Nip. 197508202008121003



Dean
Prof. Dr. Suparji S.Pd., M.Pd
Nip. 196906021994031001

1. PURPOSE

This SOP aims to regulate the operational procedures, safety management, and utilization of the facilities in the **Design Laboratory** of the Family Welfare Study Program. The SOP ensures the effective and efficient support of academic activities, research, and practical training. It also guarantees safety at work and proper maintenance of the equipment and laboratory facilities.

2. SCOPE

This SOP applies to all users of the Design Laboratory, including lecturers, students, technicians, and any other parties involved in using laboratory facilities. It covers:

- The use of equipment and laboratory facilities.
 - Safety and security at work.
 - Maintenance and care of laboratory equipment.
 - Daily operational procedures.
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3. DEFINITIONS

- **Design Laboratory:** A facility used for teaching, practical training, research, and development in design under the Family Welfare Study Program.
 - **Laboratory Users:** Students, lecturers, technicians, or staff involved in laboratory activities.
 - **Personal Protective Equipment (PPE):** Equipment such as gloves, masks, safety glasses, etc., used to protect users from physical or chemical hazards in the laboratory.
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4. RESPONSIBILITIES

4.1. Head of Laboratory

- Responsible for managing the laboratory, overseeing activities, and ensuring that equipment and facilities are in good condition.
- Approves laboratory use outside of official working hours if needed.
- Coordinates maintenance and repair of equipment with technicians.

4.2. Laboratory Technician

- Prepares the equipment and materials to be used in practical or research activities.
- Conducts routine maintenance and calibration of the equipment.
- Supervises the activities in the laboratory and ensures work safety.

4.3. Laboratory Users

- Responsible for maintaining order, cleanliness, and safety while using the laboratory.
- Must report any damage or accidents to the technician or head of the laboratory.

SOP Design Laboratory of Family Welfare Study Program

No	Process	Responsibility	Description
1	Head of Laboratory	Head of Laboratory	Manages and supervises the laboratory operations, including approval for usage and maintenance of facilities and equipment.
2	Laboratory Preparation	Laboratory Technician	Prepares equipment, materials, and laboratory facilities for practical or research activities. Checks the condition of the laboratory and ensures equipment is ready for use.
3	Activity Supervision	Laboratory Technician	Supervises the activities in the laboratory and ensures that users follow safety procedures.
4	Laboratory Usage	Supervising Lecturer / Users	Laboratory users follow instructions from the technician and supervising lecturer for using the equipment. Any damages must be reported and logged in the logbook.
5	Equipment and Material Usage	Users (Students/Lecturers)	Students or lecturers use the equipment according to the instructions. Users are

			responsible for cleaning the equipment and work area after use.
6	Waste Disposal	Users (Students/Technician)	Separate waste (organic, inorganic, chemical) according to the procedures.
7	Equipment Maintenance	Laboratory Technician	Technicians conduct regular maintenance of the equipment and facilities, perform calibration, and report if any equipment needs repair or replacement.
8	Emergency Response	All Parties	In case of emergency, such as fire or accidents, all parties must follow the established evacuation procedures. Fire extinguishers and first aid kits are available for use.

5. OPERATIONAL PROCEDURES

5.1. Preparation for Laboratory Use

1. Reservation for Use

- Users must make a reservation at least 2 business days before the scheduled use of the laboratory via the laboratory administration system or by contacting the laboratory technician.
- Each user must detail the activities, equipment used and the number of participants.

2. Initial Inspection

- Before activities begin, the laboratory technician must check the condition of the laboratory and ensure that the equipment is ready to use.
- Users are required to check the equipment condition with the technician before starting to use the laboratory. Any damage found should be immediately reported and recorded in the **Laboratory Logbook**.

3. Personal Protective Equipment (PPE)

- PPE must be worn during practical activities that involve direct contact with hazardous materials or machinery.
- Users who do not comply with PPE regulations will not be allowed to continue laboratory activities.

5.2. Laboratory Usage Procedure

1. Instructions and Supervision

- Before using any equipment, the lecturer or laboratory technician will provide instructions on how to use it, along with safety precautions.
- Users are expected to follow the usage instructions carefully to avoid damage or accidents.

2. Equipment Usage

- Every user is required to check the equipment before and after use.
- After use, equipment must be returned to its proper place, cleaned, and in good condition. Any damage must be reported and recorded in the **Damage Report Form**.
- The use of large machinery such as industrial sewing machines or design computers should only be carried out under the supervision of the laboratory technician.

3. Chemicals and Waste Management

- Chemical materials, such as paint and solvents, must be used in designated areas, typically at work tables with special ventilation.
- Chemical waste and leftover materials must be disposed of according to the laboratory waste disposal procedure. Waste must be separated into organic, inorganic, and hazardous categories.

5.3. Exit Procedures from the Laboratory

1. Cleaning the Work Area

- After completing activities, users must clean their work area, equipment, and materials used.

- Waste should be disposed of in appropriate bins according to its type (organic, inorganic, chemical waste).

2. Shutting Down Equipment

- All electrical equipment, including computers, machines, and work lights, must be turned off after use.
- Users must report the completion of activities to the laboratory technician for a final check before leaving the laboratory.

3. Activity Log

- Every user must fill in the **Laboratory Logbook**, noting the equipment used, duration of use, and the condition of the equipment after use.

5.4. Equipment Maintenance

1. Routine Checks

- The laboratory technician must conduct routine weekly checks on all equipment to ensure that there are no damages.
- Calibration of certain equipment, such as design computers or measuring tools, must be carried out every six months.

2. Repairs and Replacement

- If any equipment is found to be damaged, the laboratory technician must immediately report it to the head of the laboratory for repair or replacement.
- Severely damaged equipment that cannot be repaired should be reported by filling out the **Equipment Replacement Form**.

6. WORK SAFETY

6.1. Emergency Procedures

1. Fire

- In case of fire, users must immediately press the fire alarm and evacuate the laboratory following the designated evacuation route.

- Fire extinguishers are available in the laboratory and should only be used by trained personnel.

2. Work Accidents

- Any accident that causes injury must be immediately reported to the laboratory technician and handled with the **First Aid Kit** available in the laboratory.
 - In cases of serious injury, the campus health unit should be contacted immediately for further assistance.
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7. PENALTIES

Users who violate the rules in this SOP will be subject to administrative penalties depending on the severity of the violation, which may include:

- Verbal or written warning.
 - Temporary or permanent ban from using the laboratory.
 - Replacement costs for equipment damaged due to negligence.
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8. CLOSING

This SOP is enacted and takes effect from the date of issuance. The SOP will be reviewed and updated every two years or as needed to adjust procedures to ensure smoother laboratory operations.
